

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Nebraska Public)
Service Commission, on its Own)
Motion Seeking to Establish a) Application No. NUSF-26
Long-Term Universal Service Funding)
Mechanism)

Plan for Support of Rural Hospital Health Care Providers

On December 17, 2002, the Nebraska Public Service Commission (Commission) entered Progression Order Number 3. Progression Order Number 3 found it in the public's interest to allocate a portion of monies from the Nebraska Universal Service Fund (NUSF) to promote affordable telecommunications access for rural hospitals to larger health care facilities. The Commission found that an allocation of support for this purpose would have a positive impact on affordability of rates. The Commission found that monetary support for advanced telecommunications services will pass through communities, will promote quality health care in rural Nebraska communities, and benefit rural Nebraska communities overall.

The Commission requires that a grant of NUSF support be supplemental and secondary to the receipt of Federal Universal Service Fund (FUSF) support, grants and other available monetary sources. The rural hospitals must demonstrate that they are first availing themselves of any accessible federal support and grant monies. The Commission found rural health care facilities should be responsible for picking up a reasonable portion of their costs for connectivity as well.

The Commission directed the NUSF Department, all NETCs and the Nebraska Hospital Association (NHA) to work to develop a specific plan or plans for support approval not to exceed \$900,000 per calendar year. This does not preclude any other telecommunications provider from participating and seeking a designation of a NETC. The Nebraska Hospital Association has worked with the NUSF Department to clarify issues and has worked with all interested hospitals, NETCs, the Nebraska Information Technology Commission (NITC) and the Telehealth Subcommittee of the NITC Community Counsel.

The Commission directed the Nebraska Hospital Association to bring a specific plan or plans before the Commission for initial approval on or before June 1, 2003. In accordance with this direction the attached proposed plan is submitted. If the Commission finds it appropriate and necessary to seek additional information concerning this plan, the Nebraska Hospital Association requests a permissible process to provide such additional information.

Plan for a Statewide Nebraska Telehealth Network

May 23, 2003

Executive Summary

The participating hospitals and health care providers associated with the Nebraska Hospital Association are working together to unify and expand the use of telehealth and telemedicine networks for the delivery of the highest quality medical care to all of the citizens of Nebraska. Nebraska telehealth and telemedicine networks have been in use for over 10 years and have become part of the delivery of care provided by physicians located in rural communities. These networks allow rural health care providers to collaborate with specialists located in regional centers to diagnose and make faster decisions as to the course of treatment that a patient should receive. These networks also allow patients to do follow-up visits with specialists, sometimes hundreds of miles away, without leaving their local community. The ability to “see” the specialist locally encourages patients to complete and follow a course of treatment without having to miss days of work or incur out-of-pocket expenses associated with travel.

Over the years, multiple telehealth and telemedicine networks have been built throughout the state to serve rural areas, with most of these networks serving logical geographic territories that follow existing physician referral patterns. Because of unique specialty services at different regional centers, many of the rural hospitals belong to more than one telehealth network. The need to connect to more than one telehealth network has caused many rural hospitals to install multiple telecommunications facilities to connect to various regional centers. These telecommunications facilities are typically costing thousands of dollars per year in monthly service fees. While some of the costs for these fees are offset by grants, the grant funds are typically time-limited and may not be a sustainable way of funding these vital networks.

If sustainable funding is not found for these network facilities, many rural hospitals will not be able to continue to offer telemedicine or telehealth services to their patients. Rural health care providers are struggling financially as a result of changes in reimbursement policies and rising costs in general. The need to find a sustainable means of funding telecommunications costs for telehealth purposes is becoming even more critical in the rural communities across the state. Without sustainable funding to offset telecommunications costs, many of the under-served communities will be forced to withdraw from participating in these vital telemedicine and telehealth programs.

The hospitals throughout Nebraska have come to understand it is imperative that they cooperate whenever possible to deliver the highest quality care to patients, no matter where they are located. A statewide telehealth network, one that links current networks and offers low cost participation to health care providers, would allow providers the means to improve care while holding down costs. Such a network would allow medical centers of excellence to be made available to all Nebraskans, not just those who live near these centers.

The Nebraska Hospital Association is actively involved in creating a consolidated collaborative telehealth/telemedicine approach for statewide adoption. A major component of this effort is the unifying of the telehealth/telemedicine networks. This network will allow all hospitals to interconnect with each other while also maintaining the current telehealth/telemedicine relationships used to treat their patients. A statewide network will offer Nebraskans, patients and medical professionals, wider access to specialized health care services, as well as providing new and timely ways for clinical training and education to be delivered to rural hospital personnel and patients.

Such a network would also offer further savings by reducing the cost of communications facilities by “re-homing” the lines to reduce mileage costs charged for high bandwidth telecommunications facilities required for telehealth applications. Since telecommunications lines are billed on a mileage basis, re-homing can reduce the mileage costs by connecting the rural hospital to the closest regional center. This is accomplished by installing a “network backbone” that would interconnect regional centers and would allow for “passive switching” of telehealth connections. This approach would not only optimize mileage costs, in many cases it would eliminate the need for more than one telecommunications facility since a single access line would be able to access multiple centers. Utilizing Internet Protocol (IP) switching and addressing technology can accomplish this approach. **(Please note, the telehealth network would not have access to the public Internet, or be used for non-health care purposes. IP switching is a technology that allows packet data connections to be used to transmit multiple forms of data over a common network.)**

What is required to make this proposal a reality is approval from the Nebraska PSC to allow Nebraska Universal Service Funds (NUSF) to be used, along with Federal Universal Service Funds (FUSF) where they apply, to reduce the cost of the common network backbone and end point circuits. The use of the NUSF to offset the cost of a common backbone is well within the intended use of the fund. The economies offered by re-homing telecommunications facilities and the reduction in access lines to several hospitals would offset the cost of funding the common backbone.

The initial funding requirements have been targeted at \$900,000 per year. These funds would be used to:

1. Further reduce the cost of telecommunications lines to \$200/month/line.
2. Fund and operate a backbone network to interconnect the existing health care networks, thereby reducing the number of direct lines and reducing the health care telecommunications costs in Nebraska.

The NUSF, along with the Federal USF, would allow rural hospitals to pay a reasonable monthly service fee, estimated at \$200 per month, to certificated service providers to deliver the necessary bandwidth to connect to the statewide network. An additional fee of approximately \$50 per month would also be paid by the rural hospitals to help support the common backbone facilities that would interconnect the regional centers around the state.

The use of the NUSF to offset the ongoing monthly expense for telecommunications services is critical to the successful implementation of the statewide network. A more reasonable cost would allow continued use of the networks, which in turn would allow the citizens of rural Nebraska to have access to the best health care services the state has to offer.

The following background and implementation plan is provided to show how the NHA members plan to establish a common statewide network. The statewide network would accommodate all rural health care providers allowing them to take advantage of the network. It would also permit large hospitals in urban areas to connect to and participate as well.

Once approval is received, the NHA and participating health care providers will begin executing the appropriate tasks to implement the network using a phase-in approach. Detailed project plans will be developed and all compliance issues will be addressed. A project manager will be assigned who will have overall responsibility for the implementation process and will provide status reports as required. The goal of this plan is to implement the 4 phases within 18 months upon receiving approval.

Background

Nebraska hospitals, both rural and urban, have been leaders in the use of telehealth and telemedicine networks as a means of providing for the wellness of the citizens of Nebraska for many years. Many rural hospitals have connections to collaborating hospitals through dedicated telecommunications networks that provide access to specialists and services not offered locally, or to provide for more immediate consultation for patients and doctors to assist in critical treatment decisions. Rural patients who would have to drive sometimes hundreds of miles to see a specialist now, routinely schedule follow-up appointments for check-ups and treatment modifications from their local community hospital, often with their personal physician participating in the consultation.

Having convenient access encourages patients to follow-up with specialists because they do not have to miss a day of work or travel hundreds of miles for a 20-minute follow-up appointment. This in turn has reduced the number of re-admits to hospitals, and occasionally saves a life. Several of the Nebraska telemedicine networks have been in operation for over 7 years and have become a critical part of the health care delivery for many under-served rural communities.

“This technology has the potential to improve access to health services for all Nebraskans,” said Gov. Johanns. “Telehealth can bridge the barriers of distance to improve economic opportunities and access to health care, especially in rural areas.” - July 13, Governor Johanns

The use of telemedicine has proven so valuable that many rural hospitals will often be part of more than one telemedicine network. For example, rural communities such as Benkelman, Ord, Broken Bow, Gothenburg and Imperial belong to two telehealth networks serviced by two regional centers of excellence, Good Samaritan Health Systems in Kearney and Great Plains Regional Medical Center in North Platte. The centers provide different services and currently require two network connections. Funding for the network connections most often is provided by

short-term grants, which typically are offered on a twelve-month basis with no guarantee of renewal.

Since citizens and local physicians have come to depend on telemedicine and have incorporated it into local health care delivery, it is important to maintain these vital links. However, rural hospitals in particular are struggling with budget cuts and losses of revenue because of changes in Medicare reimbursement, along with other rising operational costs. Since grant dollars will frequently not be offered for more than 2 or 3 years, it is important that reliable sources of funding be found to offset the monthly expense for maintaining the telemedicine connections.

Convenience is an obvious reason why patients like telemedicine. In a survey done by Good Samaritan Health Systems, 23 percent said they believe the quality of care was actually better than they would get in a face-to-face visit; 77 percent said it was the same. And nearly all of them said they'd recommend telemedicine to friends and family – Good Samaritan Telemedicine Patient Survey Results

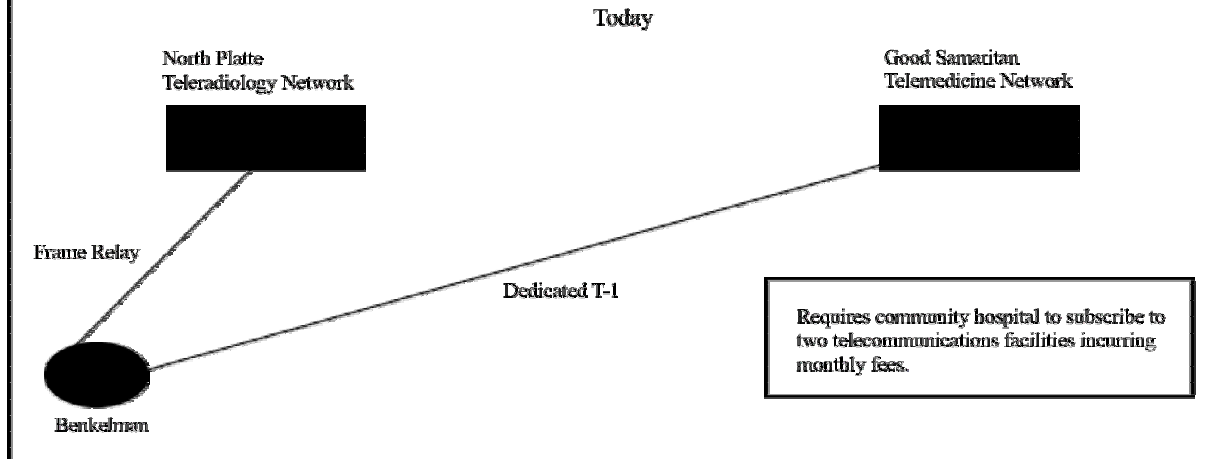
The Nebraska Universal Service Fund and the Federal Universal Service Fund are two sources of reliable funding to help sustain telehealth/telemedicine networks. In addition, the Nebraska Hospital Association has worked with its participating members to evaluate and propose a statewide telehealth network (Nebraska Telehealth Network – NTN). This common network would maintain the telemedicine and telehealth services currently provided, and at the same time look at newer technology to lower monthly telecommunications operating costs and increase the reach of telehealth to more Nebraskans. At the same time, the NHA members are looking to use the proposed telehealth network to reduce operating costs in other areas and improve health care delivery services through the use of a statewide telehealth network.

Purpose of a Statewide Telehealth Network

The purpose of a statewide network is to lower operating costs while improving access and expanding telehealth/telemedicine services to participating health care providers. By looking at the overall networking needs of health care providers throughout Nebraska, there are opportunities to offer a more efficient and cost effective network that would maintain, or in several instances, expand collaborative services while reducing annual operating cost.

As mentioned earlier, many rural hospitals are participating in multiple networks. These network connections often times use different technologies and are served by centers in different geographic locations. The use of a more efficient common network would allow hospitals to consolidate to a single network connection that would offer a reduction in monthly operating costs, and would allow access or connection to any hospital or medical center in the state on the network. What is required is a common backbone that would interconnect existing networks and provide for passive switching.

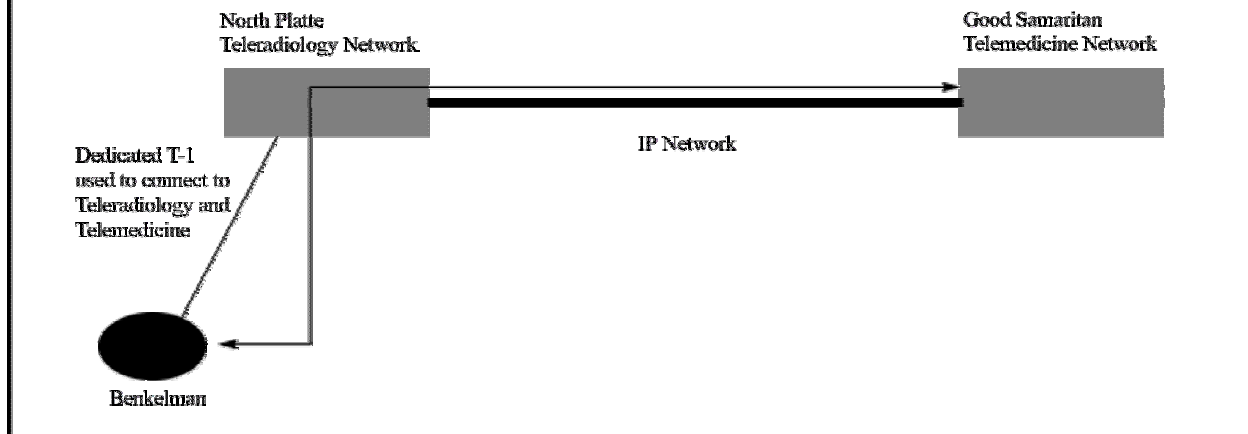
Without Passive Switching



Several hospitals are using more than one regional center for different services. The example above is reflecting a rural hospital connected to two regional centers using two mileage based network facilities that result in two monthly fees.

With Passive Switching

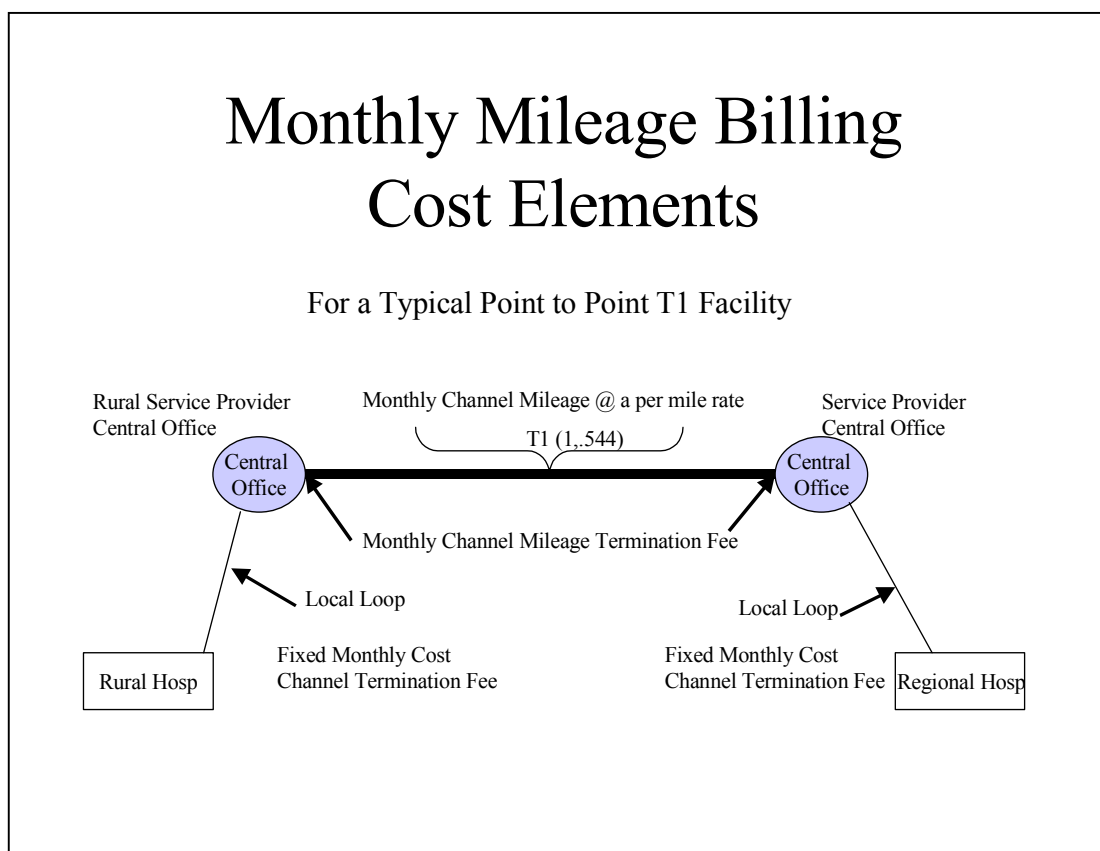
Example
With Nebraska Telehealth Network



The above reflects the use of switching to allow one network facility to have access to two different regional centers, “passive switching”. Using a common backbone, the rural hospital will have only one monthly network facility fee.

The NHA member hospitals have committed to participating in a common Nebraska telehealth network and are planning to work together with a common goal of providing interoperability and connectivity, along with sharing resources. The objective is to have a statewide “utility” that will permit hospitals to easily connect with agreed to standards based customer premise equipment (CPE), and at a low monthly cost that in the case of rural hospitals would be subsidized by the Federal and Nebraska Universal Service Funds.

The proposed network would be TCP/IP (or IP for short) based, which would permit virtually all existing networks to operate with only minor changes to existing CPE technologies. An IP network would provide/support video, voice, telemetry and text to any participating hospital in the state. In order to provide for the necessary services, bandwidth of over 1 Megabit Per Second (Mps) is required and would typically be served by a T1 (1.544 Mps) connection. The T1 service is made up of a local connection (a local loop) from the rural hospital to the local service provider. There is then a mileage charge (dollars per airline mile) to connect to the collaborating hospital community, and then another local loop to the collaborating hospital itself. The monthly cost for a T1 facility will depend upon the number of miles between the rural hospital and collaborating hospital; and depending on distance, the monthly cost can be several thousand dollars a month in a rural situation.



The above represents a typical mileage billing for a T1 broadband network facility. The facility requires monthly channel terminations and mileage channel terminations, as well as a per mile charge between points.

In contrast, a hospital in an urban area will pay substantially less than a hospital in a rural area for a connection between two locations in the metro area, typically costing only several hundred dollars a month versus several thousands of dollars. The cost discrepancy is due to the availability of broadband facilities and the cost to provide short-haul versus long-haul (mileage) network facilities.

A key success factor to such a common network is to make it affordable to operate on a monthly basis. The use of the Federal and Nebraska Universal Service Funds will lower the costs of connecting to the statewide network. The objective is to have each hospital within the state pay approximately \$200 per month for a T1 service line connected to the Nebraska Telehealth Network. Additionally, the participating hospitals will contribute a monthly fee of \$50 to the support of the common backbone required to interconnect existing networks.

Design Approach

Using the NHA as a forum, the participating hospitals have worked with a consulting group to develop a technical design for a common network. Existing health care networks and relationships will be maintained, and in several instances expanded. Recognizing that several hospitals have already purchased equipment or have undergone an evaluation process, it is not the intent to begin the process anew. The design allows for existing equipment to co-exist with future equipment in a TCP/IP network. For equipment that is not inherently IP based, converters are available to bridge the non-IP equipment into the IP network. This equipment is readily available and cost efficient when compared to replacing in-place equipment. The design approach is to:

- 1) Allow existing networks to get relief from telecommunications transport charges as quickly as possible.
- 2) Allow networks being considered to deploy rapidly with supported funding for telecommunications charges.
- 3) Provide guidance for IP bridging where needed.
- 4) Design the statewide backbone.
- 5) Issue an RFP for the backbone along with support and advanced services.
- 6) Deploy the backbone connecting the various hubs that exist or are being developed.

The design effort will begin by taking the existing networks and configuring them into an optimized common network that will offer a single network access, but offer connectivity to virtually any participating hospital that wishes to collaborate within the state.

Common applications will be agreed upon, and standard approaches that offer clinically accurate and technically supportable systems will be developed. These applications will be standards based and utilize commercially available products that offer low maintenance costs and easy operation.

Bandwidth requirements will be developed based on existing and planned use. Existing usage will be a basis for traffic analysis; however, since the network will offer more connectivity, it is anticipated that added usage will be generated because of available access to more collaborating hospitals and medical institutions.

Interoperability testing will be done to ensure that current investments in CPE technologies can be protected wherever possible. The use of standards will also simplify the training associated with the use of the network, again with an eye on efficiency and consistency. This will also offer some economies for maintenance, as well as providing a reasonable budget for day-to-day operation.

HIPAA security and privacy assessments will be done. While the network is passive in nature it will be important for participating hospitals to understand how patient confidentiality needs to be maintained when using the Nebraska Telehealth Network. Recommendations will be made to each participating hospital as to what steps need to be incorporated when patient consults are done, and patient information is required.

Beyond HIPAA, the network will be developed with security incorporated. The NTN will have the necessary security technologies to protect hospitals and patients from unauthorized access and usage.

Service provider selection will be done in a competitive and open bid. Selection of the service provider(s) will be done in accordance with state and federal guidelines to ensure that USF requirements are met. Utilization of existing state telecommunications networks where practical, will be considered as a way of holding down costs, assuming arrangements can be made that will assure compliance with NUSF guidelines and intent. The final decision as to the service provider(s) selected will be based on the following criteria: reliability, cost, standards supported, technology supported, value added services provided, logistical support, availability and sustainability.

Technical Network Design Considerations

Design Goals

The Nebraska Telehealth Network (NTN) has the following design goals:

- 1) Reduce the number and need of multiple home run lines between larger health care facilities and the rural health care sites.
- 2) Reduce the effort required to interconnect a diverse set of sites and equipment.
- 3) Facilitate the timely exchange of health care information through a variety of technologies including, but not limited to, video conferencing, teleradiology, telepsychiatry, continuing medical/nursing education and bio-threat information.
- 4) Provide HIPAA compliant security where applicable through the network.
- 5) Operate in a standards based mode.
- 6) Provide a consistent network management interface for problem resolution, traffic management and capacity planning.

Design Issues

The design of the Nebraska Telehealth Network exists at a high level. While some of the details are known, others will be resolved when the RFP is issued. It is a flexible design that focuses on value, efficiency and effectiveness.

Design issues must consider:

- Most cost effective use of communications lines;
- Standards based computing to facilitate interconnection and data transfer;
- Security; and
- Support and maintenance.

Most cost effective use of communications lines – A study of existing lines shows the existence of lines that could be eliminated by use of a backbone. A backbone would serve to interconnect existing networks and minimize the number of “home run” lines that currently exist or are planned. Reducing the number of lines that are eligible for Federal and State USF reduces costs associated with network, support and maintenance. Our study indicates that even after implementing the backbone lines, there would be a net reduction of over 10 T1 lines. The backbone would interconnect seven (7) key locations, which represent the largest networks or best concentration points for remote critical access hospitals.

Standards based computing to facilitate interconnection and data transfer – Standards provide the means by which sites, with various types of equipment, may communicate and exchange data. The purpose of the NTN is not to dictate or specify what equipment may be attached to the network. The NTN will specify a variety of standards that the sites must use in order to communicate with other sites. The over-arching standard will be TCP/IP. The NTN is designed as a TCP/IP transport. This provides the greatest flexibility in terms of equipment and applications that can make use of the NTN.

Security – Recognizing that health care data is highly sensitive, the network will operate in a dedicated address space. Firewalls at the seven node locations will verify that the traffic may enter the node. Network Address Translation protocols will allow only specific addresses to be visible outside a facility. Encryption may also be implemented as required (i.e., continuing education content may not require the same level of security/encryption as radiology).

Support and maintenance – Recognizing that the telecommunications skill set of the NTN users will vary greatly, it is proposed that the providers of the backbone also provide a one-call support facility. This facility would be available to all NTN users to assist in problem resolution and trouble escalation. This is viewed as critical since a point-to-point communication on the NTN may (and usually will) require communications through a number of carriers. To aid problem resolution, a central point to resolve problems and coordinate among the different carriers would improve network availability. Furthermore, since the backbone does not “belong” to a single user, a central point is in a much better position to perform traffic analysis and

network utilization. Monitoring this information is key to having a backbone free from congestion and with maximum availability.

Alternatives Considered

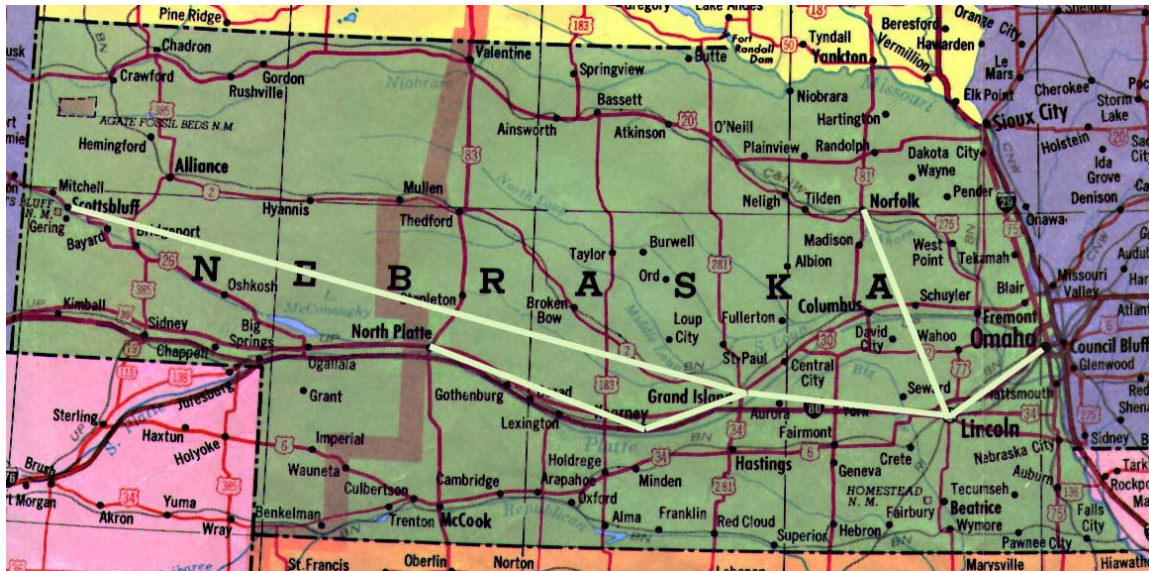
- 1) *Dark Fiber* – Use of the Dark Fiber network for the backbone was considered. While it provides a number of very interesting and powerful capabilities at this time, the quoted cost was higher than other alternatives.
- 2) *State Network* – The State network (NETCOM) provided many benefits for consideration as a backbone provider. NETCOM has an extensive coverage of the state, is able to provide a 24/7 support desk and network monitoring, offers some interesting options for dealing with peak bandwidth requirements, and has a very attractive price for lines acquired under the state contract. After consultation with Nebraska PSC staff, we found difficulties in reimbursing NETCOM for services, as they are not a certified carrier; however, an alternative billing arrangement is under investigation. NETCOM lines would not be eligible for Federal USF funds, as they would not be acquired through the RFP process.
- 3) *Pure Telco* – A Pure Telco carrier approach was considered. This approach provides extensive coverage of the state, would qualify for Federal and State USF. This option was also the most expensive in that it required the most support from Federal and State USF.

Proposed Network

As mentioned earlier, a number of health care networks currently exist in Nebraska. These networks, with hubs in North Platte, Kearney, Grand Island, Lincoln and Omaha utilize a variety of network providers. The network providers include NETCOM, Certificated Telco Providers and Dark Fiber.

The NTN seeks to deploy a high-speed data backbone to interconnect existing networks. By interconnecting the existing networks, costs are reduced as the number of “home run” lines are reduced or eliminated. A study of the existing (and planned) lines indicates that there are over 20 lines that terminate in remote locations with more than one line. The backbone will eliminate the need for the multiple terminations by allowing traffic to use the common backbone to a concentration site (existing telehealth network), which has a direct connection to the rural site. Using our earlier example, there are currently two lines to Benkelman. There is currently one circuit from North Platte and one from Kearney. These lines allow both North Platte and Kearney to communicate with Benkelman. Both lines are eligible for Federal USF support. A backbone between Kearney and North Platte (see earlier examples of passive switching) eliminates the need for one of the “home run” lines. The selection of the line between Benkelman and North Platte or Kearney would be decided on which line had the lower cost. If the lowest cost were between North Platte and Benkelman, Kearney would connect to Benkelman through North Platte. There are many other similar examples in the current networks. In fact, a statewide backbone is proposed that would require ten (10) T1 lines. These 10 T1 lines

would replace 21 existing duplicate/redundant T1 lines. This translates to 11 T1 lines no longer requiring Federal or State USF support.



The backbone, as well as all traffic on the network, will be standards based. The key standard, upon which others will be built, is TCP/IP. Video conferencing standards would be H.323, which includes (Audio: G.723, G.722; Video: H.263, H.261; Data: T.120; Control: H.225, H.245). Other standards for teleradiology are being investigated. Digital Image Communication In Medicine (DICOM) is a standard for image communication in the medical field that is supported by most vendors of digital imaging devices (CT, MR, digital X-Ray, etc). Currently DICOM files can be transferred over TCP/IP networks without impact.

There are currently seven nodes or concentration points planned for the NHN. These points are Scottsbluff, North Platte, Kearney, Grand Island, Lincoln, Norfolk and Omaha. Many of the critical access hospitals (CAHs) are already connected to these seven nodes. CAHs that have no connection will connect to the node that has the lowest cost associated with the connection. The interconnection of the nodes is designed to balance traffic while minimizing the number of hops required.

Implementation

The Nebraska Telehealth Network will be implemented in a phased approach. The following is a preliminary assessment of the implementation of major tasks. A detail project plan will be developed upon final agreement by participating hospitals.

Phase I (Estimated to take two plus months)

- Optimize and re-rate all network hub locations
 - T1 based facilities
 - IP support ensured, initial IP addressing established

- All necessary USF (Federal and State) approvals received
- End user location assessments completed
- Repair and support procedures documented
- Provisioning agreements documented
- IP Backbone Routes to be installed between selected hub sites (typically existing networks)
 - Evaluation/selection of Certificated Service Providers
 - Evaluation/selection of existing State networks if appropriate
 - Evaluation of CPE needs based on predetermined standards
 - End point Service Provider selection and provisioning needs identified
 - Installation and testing (end to end and passive switching)
 - IP addressing verified
 - End user training done as required
- The existing networks will be considered initial hubs, they are:
 - Good Samaritan Health Systems, Kearney, MNTN
 - BryanLGH Health System, Lincoln, Heartland Health Alliance
 - Regional West Medical Center, Scottsbluff
 - University of Nebraska Medical Center, Omaha
 - Saint Elizabeth Regional Medical Center, Lincoln, Teleradiology Network
 - Great Plains Regional Medical Center, North Platte, Teleradiology Network
 - Central Nebraska Area Health Education Center, Grand Island, CME/CNE
 -

Phase II (Estimated time - four months)

- End point hospitals working on existing telemedicine/telehealth networks will re-home to appropriate hub locations
 - Re-rate as required by Service Provider
 - Assure necessary USF applications and approvals received
 - Physical site assessment done if needed
 - IP address assigned
 - Provisioning order placed as required
 - CPE changes recommended if necessary
- Installation of hospitals scheduled with hub locations
 - End to end testing done to primary hubs using IP address
 - Passive routing testing done to remote hubs
 - End user training as required

Phase III (This phase will take the longest to implement—no time estimate made)

- End point hospitals not currently working with pre-existing networks scheduled
 - Rated T1 lines and engineering done by Service Provider(s)
 - Assure necessary USF applications and approvals received
 - Physical site assessment made
 - CPE recommendations made
 - IP address assigned
 - Provisioning order placed as required
- Installation of hospital T1 facility and CPE scheduled
 - Installation of facility with end to end and passive routing tested

- IP address verified
- End user training done as required

Phase IV (Time estimate to be determined)

- Expand the NTN to other health care providers and medical entities
- Evaluate public health entities becoming participants
- Evaluate inclusion of Health & Human Services as appropriate
- Evaluate and include bio-terrorism programs in association with federal CDC program

Funding Requirements

There are several assumptions being made with regard to funding:

1. Federal Universal Fund dollars will be used by all rural hospitals and participating health care entities;
2. The Nebraska Universal Fund dollars will be in addition to the Federal USF funding;
3. The USF funds would be used to pay for services provided by authorized Certificated Service Providers, those approved as ETC carriers for Federal USF funding;
4. ETC certification for any carrier will be documented as required for federal program;
5. Participating hospitals will have a choice as which service provider they choose to use;
6. The rules for determining pricing for urban and rural telecommunications facilities will remain as is for the next five years, or if there is a change the USF formulas would compensate and provide for a consistent pricing scheme;
7. All rural hospitals will pay the same monthly service fee;
8. All participating hospitals will pay an assessment for the backbone services providing interoperability.

These assumptions do not cover all day-to-day operating expenses such as personnel, billing, support and maintenance. It will be the responsibility of each participating hospital to budget for non-network costs as part of their normal service delivery.

Proforma Budget

It is the intent of this plan to not only provide a technically sound approach for a statewide Telehealth Network, but also one that provides the most cost effective network supporting as many telehealth applications as possible. The NUSF budget set aside to support the statewide Telehealth Network is \$900,000 and the plan is developed to optimize telecommunications services to stay within that budget. The use of a common backbone providing passive switching, which will allow for re-homing of T1 circuits, will reduce monthly costs by optimizing mileage costs as well as reducing the total number of circuits required due to overlapping networks. While exact costs for circuits will need to be obtained through competitive bidding, estimates and assumptions have been made in a Proforma approach to ensure that the \$900,000 budget would support the overall network.

The following spreadsheets use various assumptions as to the number of health care providers participating and backbone circuits required for the NTN. The intent of the Proforma is to determine if the design will support the number of users expected along with the anticipated network traffic with the allotted \$900,000 budget.

Example 1 – 50 participating health care providers

Proforma Attachment 1

Example 2 – 60 participating health care providers

Proforma Attachment 2

Example 3 – 70 participating health care providers

Proforma Attachment 3

Conclusion

The use of IP technology to address the technical aspects of a statewide telehealth network, along with the use of an open standards based approach to networking, will accommodate all current telehealth/telemedicine applications. Video, voice, text and data transmissions can be routed to virtually any participating health care provider in the State of Nebraska. The use of a common backbone will reduce the number of circuits currently in use by using a passive switching approach that will optimize costs for T1 circuits.

The proforma assumptions, which have been purposely conservative, indicate that the overall budget provided by the NUSF would accommodate the network in most scenarios. The goal of offering rural health care providers an affordable telehealth network can be implemented in a reasonable period of time. This telehealth network would link not only existing telehealth and telemedicine networks, but would expand the health care services available throughout the state.

On behalf of the members of the Nebraska Hospital Association members who have been working with other Nebraska public sector entities, we ask that this plan be approved.

Dated: May 23, 2003

Respectfully submitted,

The Nebraska Hospital Association on behalf of its member hospitals and the Nebraska Telehealth Development Group

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Roger S. Keetle (#21164)

CERTIFICATE OF SERVICE

I hereby certify that on the 22nd day of May, 2003, the original and five (5) paper copies together with an electronic copy of the foregoing Comments was served upon Andy S. Pollock, Executive Director of the Commission, by hand delivery, and one copy was served upon other parties to this proceeding as noted in the attached list by U.S. Mail, postage prepaid.

Roger S. Keetle